

**AMENDMENTS TO THE CLAIMS**

Please amend claim 1, and insert new claims 9-28, as follow. A complete listing of the claims is provided below.

1. (Currently Amended) A binaural hearing aid system comprising  
a first hearing aid and a second hearing aid, each of which ~~comprises~~ comprising  
a microphone and an A/D converter for provision of a digital input signal  
in response to sound signals received at the respective microphone in a sound  
environment surrounding a user of the binaural hearing aid system,  
a processor that is ~~adapted~~ configured to process the digital input ~~signals~~  
signal in accordance with a predetermined ~~selected~~ signal processing algorithm to  
generate a processed output signal, ~~and~~  
a D/A converter and an output transducer for conversion of the respective  
processed ~~sound output~~ signal to an acoustic output signal, and  
a binaural sound environment detector for binaural determination of the  
sound environment ~~surrounding a user of the binaural hearing aid system~~, the  
binaural sound environment detector comprising  
a feature extractor for determination of characteristic parameters of  
the received sound signals,  
an environment classifier for categorizing the sound environment  
based at least in part on the determined characteristic parameters, and  
a parameter map for provision of ~~outputs~~ an output for a selection  
of the signal processing algorithm,  
wherein each of the parameter maps of the first and second hearing aid ~~has an input~~  
~~connected with an output of~~ is configured to receive a first output from the environment  
classifier of the first hearing aid and ~~an input connected with an output of~~ a second output from  
the environment classifier of the second hearing aid ~~for provision of outputs~~, and generate the  
output for ~~each of the first and second hearing aids for the~~ selection of the signal processing  
algorithm ~~of each of the respective hearing aid processors so that the hearing aids of the binaural~~  
~~hearing aid system perform coordinated sound processing.~~

2-8. (Canceled)

9. (New) The binaural hearing aid system of claim 1, wherein the first output corresponds with an environment classification determined by the environment classifier of the first hearing aid, and the second output corresponds with an environment classification determined by the environment classifier of the second hearing aid

10. (New) The binaural hearing aid system of claim 1, wherein the environment classifier of each of the first and second hearing aids is configured to communicate wirelessly.

11. (New) The binaural hearing aid system of claim 1, wherein first output and the second output are in digital form.

12. (New) The binaural hearing aid system of claim 1, wherein an interval between data communication between the first and second hearing aids is at least 250 ms.

13. (New) The binaural hearing aid system of claim 1, wherein the environment classifier of either the first or the second hearing aid is configured to categorize the sound environment as an environment class selected from the group consisting of speech, babble speech, restaurant clatter, music and traffic noise.

14. (New) The binaural hearing aid system of claim 1, wherein the first output of the environment classifier of the first hearing aid comprises a plurality of values corresponding to probabilities of sound belonging to different environment classes.

15. (New) The binaural hearing aid system of claim 1, wherein the first output of the environment classifier of the first hearing aid corresponds to a selection of an environment class from a plurality of environment classes.

16. (New) The binaural hearing aid system of claim 1, wherein the first input or the second input comprises information regarding a time interval between two events of data transmission.

17. (New) The binaural hearing aid system of claim 1, wherein the parameter map of the first or second hearing aid is configured to control at least one parameter selected from the group consisting of an amount of noise reduction, an amount of broadband gain, an amount of frequency specific gain, a corner frequency of a frequency selective filter, a slope of a frequency selective filter, a knee-point of an AGC algorithm, a compression ratio of an AGC algorithm, and a directionality of a microphone.

18 (New) A binaural hearing aid system having a first hearing aid, the first hearing aid comprising:

- a microphone and an A/D converter for provision of a digital signal in response to sound signal received at the microphone in a sound environment surrounding a user of the binaural hearing aid system;

- a processor that is configured to process the digital signals in accordance with a predetermined signal processing algorithm to generate a processed output signal;

- a D/A converter and an output transducer for conversion of the processed output signal to an acoustic output signal;

- a feature extractor for determination of characteristic parameters of the received sound signals;

- an environment classifier for categorizing the sound environment based at least in part on the determined characteristic parameters; and

- a parameter map for provision of an output for a selection of the signal processing algorithm;

wherein the parameter map is configured to receive a first output from the environment classifier and a second output from an environment classifier of a second hearing aid, and generate the output for the selection of the signal processing algorithm.

19. (New) The binaural hearing aid system of claim 18, wherein the first output corresponds with an environment classification determined by the environment classifier of the first hearing aid, and the second output corresponds with an environment classification determined by the environment classifier of the second hearing aid.
20. (New) The binaural hearing aid system of claim 18, wherein the environment classifier of the first hearing aid is configured to communicate wirelessly to a parameter map of the second hearing aid.
21. (New) The binaural hearing aid system of claim 18, wherein first output and the second output are in digital form.
22. (New) The binaural hearing aid system of claim 18, wherein an interval between data communication between the first and second hearing aids is at least 250 ms.
23. (New) The binaural hearing aid system of claim 18, wherein the environment classifier of the first hearing aid is configured to categorize the sound environment as an environment class selected from the group consisting of speech, babble speech, restaurant clatter, music and traffic noise.
24. (New) The binaural hearing aid system of claim 18, wherein the first output of the environment classifier of the first hearing aid comprises a plurality of values corresponding to probabilities of sound belonging to different environment classes.
25. (New) The binaural hearing aid system of claim 18, wherein the first output of the environment classifier of the first hearing aid corresponds to a selection of an environment class from a plurality of environment classes.
26. (New) The binaural hearing aid system of claim 18, wherein the first input or the second input comprises information regarding a time interval between two events of data transmission.

27. (New) The binaural hearing aid system of claim 18, wherein the parameter map of the first hearing aid is configured to control at least one parameter selected from the group consisting of an amount of noise reduction, an amount of broadband gain, an amount of frequency specific gain, a corner frequency of a frequency selective filter, a slope of a frequency selective filter, a knee-point of an AGC algorithm, a compression ratio of an AGC algorithm, and a directionality of a microphone.

28. (New) The binaural hearing aid system of claim 18, further comprising the second hearing aid.